



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/180,208      | 10/06/2000  | Harold A. Robertson  | 36541-0005          | 8654             |

7590 07/10/2002

Mr David J Heller  
c/o Ridout & Maybee  
Suite 2400  
One Queen Street East  
Toronto, M5C 3B1  
CANADA

EXAMINER

GOLDBERG, JEANINE ANNE

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 1634     |              |

DATE MAILED: 07/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Address: ASSISTANT COMMISSIONER FOR PATENTS  
Washington, D.C. 20231

| APPLICATION NO./<br>CONTROL NO. | FILING DATE | FIRST NAMED INVENTOR /<br>PATENT IN REEXAMINATION | ATTORNEY DOCKET NO. |
|---------------------------------|-------------|---|---------------------|
|---------------------------------|-------------|---|---------------------|

EXAMINER

Jeanine Enewold Goldberg

ART UNIT      PAPER

1655      6

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 C.F.R. § 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 C.F.R. §§ 1.821-1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures.

The specification contains numerous sequences which are not identified by SEQ ID NO:. Appropriate correction is required.

The disk filed 10/18/00 contains errors. See the raw sequence listing error report.

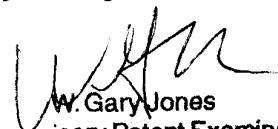
APPLICANT IS GIVEN 30 days FROM THE DATE OF THIS LETTER WITHIN WHICH TO COMPLY WITH THE SEQUENCE RULES, 37 C.F.R. §§ 1.821-1.825. Failure to comply with these requirements will result in ABANDONMENT of the application under 37 C.F.R. § 1.821(g). Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 C.F.R. § 1.136. In no case may an applicant extend the period for response beyond the six month statutory period. Direct the response to the undersigned. Applicant is requested to return a copy of the attached Notice to Comply with the response.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanine Enewold Goldberg whose telephone number is (703) 306-5817. The examiner can normally be reached on Monday-Friday from 7:00am- 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones can be reached on (703) 308-1152. The fax number for the organization where this application or proceeding is assigned is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

J. Goldberg

  
W. Gary Jones  
Supervisory Patent Examiner  
Technology Center 1600

|                         |                                      |                  |
|-------------------------|--------------------------------------|------------------|
| <b>Notice to Comply</b> | Application No.                      | Applicant(s)     |
|                         | 09/680,208                           | ROBERTSON ET AL. |
|                         | Examiner<br>Jeanine Enewold Goldberg | Art Unit<br>1655 |

## **NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES**

Applicant must file the items indicated below within the time period set the Office action to which the Notice is attached to avoid abandonment under 35 U.S.C. § 133 (extensions of time may be obtained under the provisions of 37 CFR 1.136(a)).

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

- 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If the effective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (June 1, 1998) and 1211 OG 82 (June 23, 1998).
- 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."
- 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- 6. The paper copy of the "Sequence Listing" is not the same as the computer readable from of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- 7. Other:

### **Applicant Must Provide:**

- An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.
- A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

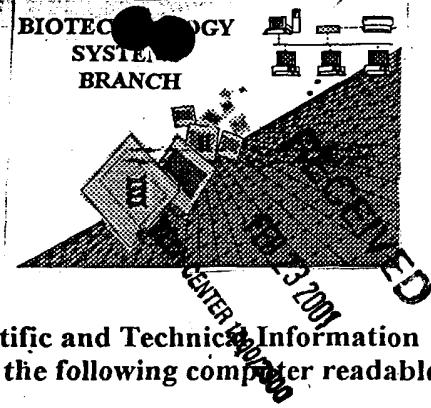
For Rules Interpretation, call (703) 308-4216  
For CRF Submission Help, call (703) 308-4212  
PatentIn Software Program Support

Technical Assistance.....703-287-0200  
To Purchase PatentIn Software.....703-306-2600

**PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR REPLY**

1633

## RAW SEQUENCE LISTING ERROR REPORT



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/680,208  
Source: OIPE  
Date Processed by STIC: 10-18-00

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)  
PATENTIN 3.0 e-mail help: [patin30help@uspto.gov](mailto:patin30help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

### **Checker Version 3.0**

The Checker Version 3.0 application is a state-of the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:  
<http://www.uspto.gov/web/offices/pac/checker>

# Sequence Listing Error Summary

| <u>ERROR DETECTED</u>   | <u>SUGGESTED CORRECTION</u>   | <u>SERIAL NUMBER:</u> <i>091156208</i> |
|---|---|--|
| <b>ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE</b> |   |  |
| 1 <input type="checkbox"/> Wrapped Nucleic  | The number/text at the end of each line "wrapped" down to the next line.<br>This may occur if your file was retrieved in a word processor after creating it.<br>Please adjust your right margin to .3, as this will prevent "wrapping".   |  |
| 2 <input type="checkbox"/> Wrapped Aminos   | The amino acid number/text at the end of each line "wrapped" down to the next line.<br>This may occur if your file was retrieved in a word processor after creating it.<br>Please adjust your right margin to .3, as this will prevent "wrapping".  |  |
| 3 <input type="checkbox"/> Incorrect Line Length  | The rules require that a line not exceed 72 characters in length. This includes spaces.   |  |
| 4 <input type="checkbox"/> Misaligned Amino Acid Numbering  | The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs between the numbering. It is recommended to delete any tabs and use spacing between the numbers.   |  |
| 5 <input type="checkbox"/> Non-ASCII  | This file was not saved in ASCII (DOS) text, as required by the Sequence Rules.<br>Please ensure your subsequent submission is saved in ASCII text so that it can be processed.   |  |
| 6 <input type="checkbox"/> Variable Length  | Sequence(s) <input type="checkbox"/> contain n's or Xaa's which represented more than one residue.<br>As per the rules, each n or Xaa can only represent a single residue.<br>Please present the maximum number of each residue having variable length and indicate in the (ix) feature section that some may be missing.   |  |
| 7 <input type="checkbox"/> PatentIn ver. 2.0 "bug"  | A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequence(s) <input type="checkbox"/> . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. <b>This applies primarily to the mandatory &lt;220&gt;-&lt;223&gt; sections for Artificial or Unknown sequences.</b>             |  |
| 8 <input type="checkbox"/> Skipped Sequences (OLD RULES)  | Sequence(s) <input type="checkbox"/> missing. If intentional, please use the following format for each skipped sequence:<br><b>(2) INFORMATION FOR SEQ ID NO:X:</b><br><b>(i) SEQUENCE CHARACTERISTICS:</b> (Do not insert any headings under "SEQUENCE CHARACTERISTICS")<br><b>(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X:</b><br><b>This sequence is intentionally skipped</b><br><br>Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s). |  |
| 9 <input type="checkbox"/> Skipped Sequences (NEW RULES)  | Sequence(s) <input type="checkbox"/> missing. If intentional, please use the following format for each skipped sequence.<br><b>&lt;210&gt; sequence id number</b><br><b>&lt;400&gt; sequence id number</b><br><b>000</b>  |  |
| 10 <input checked="" type="checkbox"/> Use of n's or Xaa's (NEW RULES)                                      | Use of n's and/or Xaa's have been detected in the Sequence Listing.<br>Use of <220> to <223> is MANDATORY if n's or Xaa's are present.<br>In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.  |  |
| 11 <input type="checkbox"/> Use of <213>Organism (NEW RULES)  | Sequence(s) <input type="checkbox"/> are missing this mandatory field or its response.  |  |
| 12 <input checked="" type="checkbox"/> Use of <220>Feature (NEW RULES)                                      | Sequence(s) <input type="checkbox"/> are missing the <220>Feature and associated headings.<br>Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial" or "Unknown"<br><b>Please explain source of genetic material in &lt;220&gt; to &lt;223&gt; section.</b><br>(See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of new Rules)  |  |
| 13 <input type="checkbox"/> PatentIn ver. 2.0 "bug"   | <b>Please do not use "Copy to Disk" function of PatentIn version 2.0.</b> This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other means to copy file to floppy disk.   |  |

OIPE

RAW SEQUENCE LISTING DATE: 10/18/2000  
PATENT APPLICATION: US/09/680,208 TIME: 17:13:50

Input Set : A:\HD GENE.txt  
Output Set: N:\CRF3\10182000\I680208.raw

Does Not Comply  
Corrected Diskette Needed

see pp. 6, 7

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/680,208

DATE: 10/18/2000  
TIME: 17:13:50

Input Set : A:\HD GENE.txt  
Output Set: N:\CRF3\10182000\I680208.raw

118 gtcaggctga ctgcacagtc accgttaaaa ctgagtcgt cacacacagg ctgtcaagcc 1740  
 120 cggcttccac ttgcattgggt attcttattt cacacgtgaa ttctgttgc tggctggctg 1800  
 122 actgcatttata tctatgtcaa ttgttataatca ggagtggccca gcaagagccca tcattttcac 1860  
 124 tgctttttttt gaaacatgtt acgggtttgtat cgttgcacgtt attttaaaatca ttcatgtcaa 1920  
 126 tgacaaatgtt ctcaagttagt gaaaggcaggc tgcgttgcgtt cttaactataa 1980  
 128 ttgttggat ttgttactgg aacagtatcat ggaggcctgaa ccttgggggg gcacagggtg 2040  
 130 gaacccatgtt tgaatataatgt ttgtgtctca agagaaatgtc aggggtactat ctcgttgc 2100  
 132 aatcccttccatg tactatataat acatttgtcc tttttatctc taatgttaaaatccca 2160  
 134 aacacttggt tttttttttt cttttttttt cttttttttt tttttttttt tttttttttt 2220  
 136 cttgtttttttt tttttttttt cttttttttt cttttttttt tttttttttt tttttttttt 2280  
 138 gatgtatgggg aatagtgtttt cttatgtatc tttttttttt tttttttttt tttttttttt 2340  
 140 ttactgtaca aaaaacccatgt gcaatgtatc atcaaaatggc gtcgttctt gtttacatgt 2400  
 142 ccccacctat taaaaaaatca cttttttttt cttttttttt cttttttttt tttttttttt 2460  
 144 caaaatggcgtt gttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 2520  
 146 aaaaatggcgtt cttttttttt cttttttttt cttttttttt tttttttttt tttttttttt 2580  
 148 tccttgcgtt cttttttttt cttttttttt cttttttttt tttttttttt tttttttttt 2640  
 150 gatgggtccg cttttttttt cttttttttt tttttttttt tttttttttt tttttttttt 2700  
 152 agctttatgtt atccaaatattt attatgttgc atgggtttttt tttttttttt tttttttttt 2760  
 154 gatttttatgtt gttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 2820  
 156 gagggtttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 2880  
 158 atttttttttgc agttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 2940  
 160 taatctttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 3000  
 162 atatgtttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 3060  
 164 aagaatgtttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 3120  
 166 gatacatgtttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 3180  
 168 attttttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 3236  
 172 <210> SEQ ID NO: 2  
 174 <211> LENGTH: 5752  
 176 <212> TYPE: DNA  
 178 <213> ORGANISM: mouse  
 182 <400> SEQUENCE: 2  
 184 aagtgttaat aaaaataaaaca tttttttttt tttttttttt tttttttttt tttttttttt 60  
 186 ttcttgcctt cttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 120  
 188 ttgttgcattttaatgtt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 180  
 190 ttatagatgtt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 240  
 192 aacaaatgtt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 300  
 194 agaggggaaa gttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 360  
 196 acggggggggg tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 420  
 198 cactgaggag tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 480  
 200 ctccacatgtt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 540  
 202 gcttgcattttaatgtt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 600  
 204 atcaaaaactt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 660  
 206 ttgttgcattt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 720  
 208 ggtttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 780  
 210 gcttgcattt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 840  
 212 taatagatgtt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 900  
 214 atatattttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 960  
 216 tatataaagt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 1020  
 218 tagtggccat tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 1080

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/680,208

DATE: 10/18/2000  
TIME: 17:13:50

Input Set : A:\HD GENE.txt  
Output Set: N:\CRF3\10182000\I680208.raw

|     |             |             |              |             |             |             |      |
|-----|-------------|-------------|--------------|-------------|-------------|-------------|------|
| 220 | ggagatagaa  | tttgcctct   | gcattccttg   | ggctggcaca  | ggtataatgc  | tgtggaaatt  | 1140 |
| 222 | gggaaactac  | aagaagctg   | caaagctggg   | cggaaactcg  | ttccgc当地    | tgggctc当地   | 1200 |
| 224 | taatgttcc   | tgc当地       | c当地actgc     | gtgaaactt   | aaacattgt   | gttccaggag  | 1260 |
| 226 | tgttagatg   | c当地ataatg   | tacaaggc当地   | ggaggaggat  | atttccagac  | taaggaaag   | 1320 |
| 228 | aaaaccatt   | gtgttattaa  | c当地tc当地      | tgagc当地     | caccctccata | cacacacaca  | 1380 |
| 230 | cacacacaca  | cacacacaca  | caaccaaaca   | gaacaaat    | acatgc当地    | ctacagctc   | 1440 |
| 232 | caggaaacaa  | atggatgtc   | ttgtggaaac   | caggagatc   | acaggctca   | acctctgtc   | 1500 |
| 234 | c当地aaaccc   | ctgaaatgt   | gtcagggtca   | aatgttacaa  | agcaggctca  | ggaaggctt   | 1560 |
| 236 | tagtggaa    | tttttttctt  | caactctagg   | aacaacctat  | ttccttagat  | ttggagatg   | 1620 |
| 238 | ctc当地ggaa   | aacattc当地   | caactgtatc   | tctctgtt    | ccccaggat   | aggtatggg   | 1680 |
| 240 | tgatgtatgt  | gtgtc当地at   | atgtgtttaga  | tatattaga   | cagcgttgc   | tctgtc当地    | 1740 |
| 242 | aacgc当地     | agacccggcc  | tttcaatgtag  | cttagctgt   | gctctgtt    | tgctcttta   | 1800 |
| 244 | ggctaaact   | atgggtgtc   | ttttaataga   | acaaaatgt   | gcatettgc   | ttgggttgg   | 1860 |
| 246 | c当地tcttgg   | ttcaatgtgt  | acttctcccc   | tttctctt    | gtgtc当地     | tacccttcca  | 1920 |
| 248 | gagtgtaagg  | gacaatcttt  | aaggaggcgt   | gtccccgtt   | ggggatccat  | ttgttccagg  | 1980 |
| 250 | gtgc当地      | tcaccccaact | tgactgacat   | tcacccgtt   | gactatggg   | tccttctgtt  | 2040 |
| 252 | tgttagggaa  | gggtggctca  | gttggaggea   | tcaatctgtt  | gggttctgtt  | tcccggtc    | 2100 |
| 254 | c当地tgggtt   | gaaagtcttct | tctctgtata   | tcttccat    | gcatttgtt   | ttgtgttgg   | 2160 |
| 256 | tgtatgttgc  | cgacggaggaa | tttcttggat   | actctccat   | agtc当地ac    | tccccc当地    | 2220 |
| 258 | gcaaagtgtc  | aggtgtacte  | gacagtc当地    | gtaaaatctg  | agtc当地      | acacaggctg  | 2280 |
| 260 | tcagggccacg | cttccatctg  | catgtgttatt  | ctattttcac  | agtc当地gtt   | ctgtgttgg   | 2340 |
| 262 | ctgggtact   | ggc当地at     | atgtctatgt   | gaaatcaggg  | gtggccaggae | gagccata    | 2400 |
| 264 | tttctatgt   | cttggaaaca  | aagtgttacg   | gtttgtatcg  | tqaacgttatt | taaagctt    | 2460 |
| 266 | catgaatga   | caaagtgtc   | agtagtggaa   | ggcaggctgt  | gaccagctg   | cctgtctt    | 2520 |
| 268 | actataatgt  | tgaggatgtt  | ttactgttgg   | agtagatcg   | ggccgtgact  | ttgtggggc   | 2580 |
| 270 | cagggtggaa  | c当地atgtgt   | atatagtgt    | tgtctcaaga  | ggaaggctt   | ttactgtc    | 2640 |
| 272 | agtgtcaat   | ctccaggatc  | tatataataca  | tttgc当地gtt  | ttatctctaa  | tgtgaaataa  | 2700 |
| 274 | atccccaaac  | actgttgc当地  | cggtgtatcg   | acctaaaaaa  | ctatcttatt  | atgggtgtc   | 2760 |
| 276 | ccacttcc    | ttgtgggtca  | ccccccatccc  | ccgggttctt  | gctgtatcg   | gaacactgtc  | 2820 |
| 278 | tataatgtat  | gtatgtggaa  | atgtgttcc    | ttatgtatgt  | ttgtctggat  | atatgotaca  | 2880 |
| 280 | tgttcat     | ttgtatc当地   | aaaaccaggatc | gtgtatgt    | caaaggatc   | tctctgtt    | 2940 |
| 282 | tagatgtcc   | c当地atccat   | aaaatcacgt   | acttgc当地    | aaactgtt    | aaacttaac   | 3000 |
| 284 | ataaggaa    | acgc当地gtc   | tttggatctt   | ccaaaggagaa | caggttctt   | cacaggaa    | 3060 |
| 286 | c当地atccaa   | agaggatccgc | ccgcatccac   | accaggccaa  | gacacctt    | aggccatagg  | 3120 |
| 288 | gacaaccc    | ttgtgtggca  | acacgtgt     | gagcaggggc  | acaggtcc    | gcaactgtc   | 3180 |
| 290 | ctc当地atgt   | gggtgtcg    | ccaaaggctt   | aatgggtct   | ttttgttgg   | ggaaggaaag  | 3240 |
| 292 | atttcaacg   | ttatgtatatt | caatattatt   | atagttgtat  | atgttagt    | ttccaaa     | 3300 |
| 294 | aaaatgtat   | tttataatgt  | tgatcataaaa  | aaaatctt    | taaggatcg   | aaagtgtcata | 3360 |
| 296 | attttaaagag | gtcttat     | tgc当地tata    | aatttataat  | attgtatcg   | tgtgtat     | 3420 |
| 298 | ttatcatgtt  | catttgc     | ttttgttattt  | aaaaaaaat   | tactgtt     | ttttgtat    | 3480 |
| 300 | aaaacattaa  | tcat        | tataatgt     | aagggttataa | taaattcata  | attcaacac   | 3540 |
| 302 | ccagtatata  | tgc当地at     | tggtgttacat  | tgccaaat    | tctatctt    | tttatttac   | 3600 |
| 304 | atgtttaaag  | aagtaaaaaa  | tcttttgc当地   | atatgtat    | atacatata   | agtatata    | 3660 |
| 306 | tatgtatgt   | atcatgtat   | tatgtatgaa   | tgttcatata  | ttaatgtat   | atcttttgg   | 3720 |
| 308 | gtgtat      | aatgtat     | tatgtatgaa   | aaaaaaaat   | tactgtt     | ttttgtat    | 3780 |
| 310 | aaaat       | ttttttt     | ttatcc       | gat         | actatgtt    | taacctt     | 3840 |
| 312 | ggcaggccaa  | gaggatcg    | atgtgttca    | catagaa     | agggacca    | tttcttctt   | 3900 |
| 314 | acatgtat    | acttctgt    | ttgtcttca    | catcttca    | gtccggaa    | tcgggggt    | 3960 |
| 316 | tgtgggtt    | tgatgtat    | acttggagg    | caagaa      | caatctt     | tgtatgtat   | 4020 |

RAW SEQUENCE LISTING DATE: 10/18/2000  
PATENT APPLICATION: US/09/680,208 TIME: 17:13:50

Input Set : A:\HD\_GENE.txt  
Output Set: N:\CRF3\10182000\1680208.raw

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/680,208

DATE: 10/18/2000

TIME: 17:13:50

Input Set : A:\HD GENE.txt  
Output Set: N:\CRF3\10182000\I680208.raw

```

426 agggctgtca atcatgctgg 20
430 <210> SEQ ID NO: 5
432 <211> LENGTH: 20
434 <212> TYPE: DNA
436 <213> ORGANISM: Artificial Sequence
440 <220> FEATURE:
442 <223> OTHER INFORMATION: Description of Artificial Sequence:primer
446 <400> SEQUENCE: 5
448 aaactcacgc tcggtgacgc 20
452 <210> SEQ ID NO: 6
454 <211> LENGTH: 24
456 <212> TYPE: DNA
458 <213> ORGANISM: Artificial Sequence
462 <220> FEATURE:
464 <223> OTHER INFORMATION: Description of Artificial Sequence:probe
468 <400> SEQUENCE: 6
470 attaacccctc actaaatgct gtat 24
474 <210> SEQ ID NO: 7
476 <211> LENGTH: 30
478 <212> TYPE: DNA
480 <213> ORGANISM: Artificial Sequence
484 <220> FEATURE:
486 <223> OTHER INFORMATION: Description of Artificial Sequence:probe
490 <400> SEQUENCE: 7
492 cattatgctg agtgatatact ttttttttcg 30
496 <210> SEQ ID NO: 8
498 <211> LENGTH: 38
500 <212> TYPE: DNA
502 <213> ORGANISM: Artificial Sequence
506 <220> FEATURE:
508 <223> OTHER INFORMATION: Description of Artificial Sequence:probe
512 <400> SEQUENCE: 8
514 gaacatgttag catatactcc agacaacaga tcataatgg 38
518 <210> SEQ ID NO: 9
520 <211> LENGTH: 32
522 <212> TYPE: DNA
524 <213> ORGANISM: Artificial Sequence
528 <220> FEATURE:
530 <223> OTHER INFORMATION: Description of Artificial Sequence:probe
534 <400> SEQUENCE: 9
536 cagcttctcc acaggaacac agtaacaaag ag 32
540 <210> SEQ ID NO: 10
542 <211> LENGTH: 35
544 <212> TYPE: DNA
546 <213> ORGANISM: Artificial Sequence
550 <220> FEATURE:
552 <223> OTHER INFORMATION: Description of Artificial Sequence:primer
556 <400> SEQUENCE: 10
558 ctatttcaca agagactgac cagccaataa atctc 35

```

9/6/86, 208

P6

<210> 11  
□  
<211> 7581  
□  
<212> DNA  
□  
<213> Unknown

<400> 11

Seq # 11 (small segment shown)

→ Missing mandatory <220>, <223> features  
to explain the "Unknown" sequence. See  
#12 on Error Summary Sheet.

ggtaaaaaaa aagcatgtga atnnataacaa ntctanant ntanngnat gttatggcag 3420  
aattttagtc acgtccaaaa caaaaagatt attccagaag atacctcatc ctatgcctga 3480  
aaggctccac agcatggcgt ccgtctccca gggttctgat ccgtctccctc acggtgcaat 3540  
caggcaggac agagaggagg gctgcagggc taccacattg acccagaagg tatctcctct 3600  
caccattcag acatccataa ggaatgccaa atgctgtatt gaatagttct ctgttgact 3660  
ttctagagaa gccaggacac cctgagcctt tcnnngggaa ctctaaggag tcacaggttc 3720

✓

Missing mandatory <220> to <223> features  
to explain "n's" in the sequence. See #10  
on Error Summary Sheet. Please check  
entire sequence for "n's" and explain  
each instance.

09/6 84.2.08

P 7

<210> 12

□

<211> 7618

□

<212> DNA

□

<213> mouse

□

missing mandatory <220> to <223> feature  
to explain "Ns" in the sequence. See

<400> 12 #16 on Error Summary Sheet. Please  
check entire sequence for "Ns" and explain each

tgccccaccc atttaaaaat cacgtaca~~an~~ cccagaacac tgtgaaacac ttaacataag 6840

□

aaacaaaacgc agcgctctgga ttctttccaa ggagagcagc tttctccaca ggaacacagt 6900

□

aacaaaagag gtccggccgc atccacaccc agccaagaca cctcagaggc catagggaca 6960

□

accccttgc tggccaaacac ctgctggagc agggcacagg tcccagcaac tgatcctcag 7020

□

tggatgggtc cgca~~gt~~caaa gccttaatgg gctctttt gaagggaaa gaa~~nn~~ttc 7080

## VERIFICATION SUMMARY

PATENT APPLICATION: US/09/680,208

DATE: 10/18/2000

TIME: 17:13:51

Input Set : A:\HD GENE.txt

Output Set: N:\CRF3\10182000\I680208.raw

L:24 M:270 C: Current Application Number differs, Replaced Application Number  
L:26 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:572 M:258 W: Mandatory Feature missing, <220> FEATURE:  
L:572 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:  
L:678 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:11  
L:678 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:11  
L:678 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:11  
L:686 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:11  
L:686 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:11  
M:340 Repeated in SeqNo=11  
L:696 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:11  
L:696 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:11  
L:800 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:11  
L:800 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:11  
L:808 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:11  
L:808 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:11  
L:1068 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:12  
L:1068 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:12  
L:1068 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:12  
L:1068 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:12  
L:1068 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:12  
L:1076 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:12  
L:1076 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:12  
L:1076 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:12  
L:1076 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:12  
M:340 Repeated in SeqNo=12